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Sequence Listing could not be accepted due to errors.

See attached Validation Report.

If you need help call the Patent Electronic Business Center at (866) 217-9197 (toll free).

Reviewer: Anne Corrigan

Timestamp: [year=2009; month=5; day=28; hr=12; min=33; sec=4; ms=333;]

=====

Reviewer Comments:

<140> 10/082,973

2002-02-26

Please insert a <141> at the beginning of the above "2002-02-26" line; <141> is a mandatory numeric identifier indicating the current filing date.

<210> 8

<211> 56

<212> DNA

<213> E. coli

Please spell out the Genus ("Escherichia") in the above <213> response; per Sequence Rules, show the Genus species in that response. Same response in subsequent sequences.

<210> 20

<211> 34

<212> DNA

<213> Mus musculus

Please change the above <213> response to "Mus musculus".

<210> 21

<211> 36

<212> DNA

<213> HBV

Please spell out the virus in the above <213> response; same in Sequence

22.

<210> 51

<211> 364

<212> DNA

213> Artificial Sequence

<220>

<223> pSnip ribozyme cassette

Please add an opening bracket ("<") to the above <213> numeric identifier. It must be <213>.

Application No: 10082973

Version No: 3.0

Input Set:

Output Set:

Started: 2009-05-28 10:39:30.012

Finished: 2009-05-28 10:39:33.620

Elapsed: 0 hr(s) 0 min(s) 3 sec(s) 608 ms

Total Warnings: 45

Total Errors: 2

No. of SeqIDs Defined: 73

Actual SeqID Count: 73

Error code	Error Description
W 213	Artificial or Unknown found in <213> in SEQ ID (1)
W 213	Artificial or Unknown found in <213> in SEQ ID (2)
W 213	Artificial or Unknown found in <213> in SEQ ID (3)
W 213	Artificial or Unknown found in <213> in SEQ ID (4)
W 213	Artificial or Unknown found in <213> in SEQ ID (5)
W 213	Artificial or Unknown found in <213> in SEQ ID (6)
W 213	Artificial or Unknown found in <213> in SEQ ID (7)
W 402	Undefined organism found in <213> in SEQ ID (8)
W 402	Undefined organism found in <213> in SEQ ID (9)
W 402	Undefined organism found in <213> in SEQ ID (10)
W 402	Undefined organism found in <213> in SEQ ID (11)
W 402	Undefined organism found in <213> in SEQ ID (12)
W 402	Undefined organism found in <213> in SEQ ID (15)
W 213	Artificial or Unknown found in <213> in SEQ ID (18)
W 402	Undefined organism found in <213> in SEQ ID (20)
W 402	Undefined organism found in <213> in SEQ ID (21)
W 402	Undefined organism found in <213> in SEQ ID (22)
W 213	Artificial or Unknown found in <213> in SEQ ID (37)
W 213	Artificial or Unknown found in <213> in SEQ ID (38)
W 213	Artificial or Unknown found in <213> in SEQ ID (39)

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Error code	Error Description
W 213	Artificial or Unknown found in <213> in SEQ ID (40)
W 213	Artificial or Unknown found in <213> in SEQ ID (41)
W 213	Artificial or Unknown found in <213> in SEQ ID (42)
W 213	Artificial or Unknown found in <213> in SEQ ID (43)
W 213	Artificial or Unknown found in <213> in SEQ ID (44)
W 213	Artificial or Unknown found in <213> in SEQ ID (45)
W 213	Artificial or Unknown found in <213> in SEQ ID (46)
W 213	Artificial or Unknown found in <213> in SEQ ID (47)
W 213	Artificial or Unknown found in <213> in SEQ ID (48) This error has occurred more than 20 times, will not be displayed
E 249	Order Sequence Error <212> -> <220>; Expected Mandatory Tag: <213> in SEQID (51)
W 402	Undefined organism found in <213> in SEQ ID (54)
W 402	Undefined organism found in <213> in SEQ ID (55)
W 402	Undefined organism found in <213> in SEQ ID (56)
W 402	Undefined organism found in <213> in SEQ ID (57)
W 402	Undefined organism found in <213> in SEQ ID (58)
W 402	Undefined organism found in <213> in SEQ ID (59)
W 402	Undefined organism found in <213> in SEQ ID (60)
W 402	Undefined organism found in <213> in SEQ ID (61)
W 402	Undefined organism found in <213> in SEQ ID (62)
W 402	Undefined organism found in <213> in SEQ ID (63)
W 402	Undefined organism found in <213> in SEQ ID (64) This error has occurred more than 20 times, will not be displayed

Input Set:

Output Set:

Started: 2009-05-28 10:39:30.012
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Total Warnings: 45
Total Errors: 2
No. of SeqIDs Defined: 73
Actual SeqID Count: 73

Error code	Error Description
E 250	Structural Validation Error; Sequence listing may not be indexable

SEQUENCE LISTING

<110> Norris, James S.
 Clawson, Gary A.
 Schmidt, Michael G.
 Hoel, Brian D.
 Pan, Wei-Hua
 Dolan, Joseph W.

<120> TISSUE-SPECIFIC AND TARGET RNA-SPECIFIC RIBOZYMES

<130> 14017-0004002

<140> 10/082,973
 2002-02-26

<150> 09/338,942

<151> 1999-06-24

<150> 60/090,560

<151> 1998-06-24

<150> 60/096,502

<151> 1998-08-14

<160> 73

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 492

<212> DNA

<213> Artificial Sequence

<220>

<223> ARN promoter

<400> 1

actcgcgat catcttcacc atcggccgca actcctgcgg gatatacctcg tctctctcct	60
ccaccggcac ccccatggta gcggccaagct cgcgccctgc ctgggaaaagc tgtacatgct	120
gatecgggcg gtcgggtgccg gcggccgggt cttccgcctg ctcggcggtg ccggtccgtg	180
cggccttggc gtcgcggcg gcgcgcgatg agggcgccac ctgggtggtg atccagccac	240
tgagggtcaa cattccagtc actccgggaa aaatggaatt cttccattgg atcggccac	300
gcgtgcgaa cttgagcccc ctttctgctg ccccttgaca ggggtgcgaca ggtagtcgca	360
gttggttgac gcaagtcaact gattggaaac gccatcggcc tgtcagaaat ggtcgttgcc	420
agacctatgg ctggcaccgg catcgcggt gcgttacct tactcctgtt gtgcctttaa	480
cctagcaagg ac	492

<210> 2

<211> 1113

<212> DNA

<213> Artificial Sequence

<220>

<223> PROC promoter

<400> 2

aattccctcga agtccttgcg ctgcttgcg ttcattgatgt cgtagatcag cgcattgcacc	60
tgcttgtgtt ccagcgttg caggttgatc cggcgtacat cggcatccac ccggatcatg	120
ggtgagcaggc cggcggagag gtgcaggctc gaagcgcct gtttggcact gaaggcagac	180
agctcggtaa tatccatggg actccccaat tacaagcaag caggtagaat gccgccaaaag	240
ccgcctgtct ggacaaggaa aacaccggat gagccagggt gcttccagga caccgctggt	300
gtctcgcgc agacgcggaa cctcgacact ggaacaggaa gatggccatc gaggcggcg	360
gtttcgaggg cgtcgagccg acgcgcacgc cacttccata gggcgcagggt aatgtccacg	420
atagcagaga atattgcaaa ggttgccgcg cgcattccgtg aggcagcgca agctgcgggg	480
cgcgataccg ccacggtcgg cctgctcgcc gtgagcaaga ccaagccgc cgcgcgggtg	540
cgcgaggcgc acgcgcgcgg ccttcgcgac ttccggcgaaa actaectgca ggaggccctc	600
ggcaagcagg ccgaactggc cgacctgccc ttgaactggc acttcacgg ccccatccag	660
tcgaacaaga cgcggcccat cgcgcgacat ttccagtggg tgcactcggg ggaccggttg	720
aagatcgccg agcgcctgtc ggagcaacgc cggcgcgggc tgccgcctct gaatgtctgc	780
ctgcagggtc acgtcagcgg cgaagccagc aagtcgggt gcgccccga ggacctgcg	840
gccctggcgc aggcctgaa gcaactgccc aacctcggat tgcgtggcct gatggccatc	900
cccgaaccca ccgcgcgacg cgcgcgcgaa caccgcgcgt tcgcccgcct gcgcgaactg	960
ctgctggacc tgaaccttgg cctggacacc ctgtccatgg gcattgagcga cgacctcgag	1020
gcagccatcg gcgaagggtc gacctgggtc cgcattcggt cgcgcctgtt cggcgcgcgc	1080
gactacggcg cgcgcgcttc ttgaatgaat ccc	1113

<210> 3

<211> 66

<212> DNA

<213> Artificial Sequence

<220>

<223> ARC promoter

<400> 3

ctagagctat tgatgtgat caacattgtc cactagccgc tgccgcctaa tctccagaat	60
tgtgag	66

<210> 4

<211> 685

<212> DNA

<213> Artificial Sequence

<220>

<223> UPCM2 cassette sequence

<400> 4

tcagaaaatt attttaaat tccaattgac attgtgagcg gataacaata taatgtgtgg	60
aagettatcg ataccgtcga cctcgaagct ttggaacct gatgagtcg tgaggacgaa	120
acgatgacat tctgtcgacc agattcacgg tcagcagaat gtcacgtcg gttccaggat	180
ccggctgcta acaaagcccg aaaggaagct gagttggctg ctgccaccgc tgagcaataa	240
ctagcataac ccttggggc ctctaaacgg gtcttgaggg gttttttgct gaaaggagga	300
actataatcg gatataccgc aagaggeccg gcagtaccgg cataaccaag cctatgccta	360
cagcatccag ggtgacggtg ccgaggatga cgatgagcgc attgttagat ttcatacacg	420
gtgctgact gcgttagcaa tttaactgtg ataaactacc gcattaaage ttatcgatga	480
taagctgtca aacatgagaa ttccgcgtat acgcgaatt tcaagggtct gcgcaacgac	540
gacgatgagg taccacatcg tcgtcgttgc gactgatga ggcggtgagg ccgaaacct	600
tgacgcgtaa aaaaaacccg ccccgcgagg ttttttacc ttctatgcg gccgctctag	660
tcgagggggg gcccgctaga actag	685

<210> 5

<211> 673

<212> DNA

<213> Artificial Sequence

<220>

<223> P2CM2 cassette sequence

<400> 5

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agaaagcaaa aataaatgct tgacactgta gcgggaaggc gtataatgga attgtgagcg      60
gataacaatt cacaagctta tcgataccgt cgacctcgag ctttggaacc ctgatgagtc      120
cgtgaggacg aaacgatgac attctgctga ccagattcac ggtcagcaga atgtcatcgt      180
cggttccagg atccggctgc taacaaagcc cgaaaggaag ctgagttggc tgetgccacc      240
gctgagcaat aactagcata accccttggg gcctctaaac gggctttgag ggggtttttg      300
ctgaaaggag gaactatata cggatatccc gcaagaggcc cggcagtacc ggcataacca      360
agcctatgcc tacagcatcc agggtgacgg tgccgaggat gacgatgagc gcattgttag      420
atttcataca cggtgccctga ctgcgttagc aatttaactg tgataaacta ccgcattaaa      480
gcttatcgat gataagctgt caaacatgag aattcggcgt atacgccgaa tttcaagggg      540
ctgcgcaacg acgacgatga ggtaccacat cgtcgtcgtt gcgcactgat gaggccgtga      600
ggccgaaacc cttgacgcgt aaaaaaaccc cgccccggcg ggttttttac gcgttcctat      660
gcggccgctc tag                                         673
```

<210> 6

<211> 14

<212> DNA

<213> Artificial Sequence

<220>

<223> primer

<400> 6

```
agctcgagct caga                                         14
```

<210> 7

<211> 17

<212> DNA

<213> Artificial Sequence

<220>

<223> primer

<400> 7

```
tcgacggatc tagatcc                                         17
```

<210> 8

<211> 56

<212> DNA

<213> E. coli

<400> 8

```
agatctaaat cattcacctg atgagtcctg gaggacgaaa ctttagcaaa ccaagg      56
```

<210> 9

<211> 54

<212> DNA

<213> E. coli

<400> 9

agatctaaat tcgtttctga tgagtcctg aggacgaaac accacaaaag atct 54

<210> 10

<211> 54

<212> DNA

<213> E. coli

<400> 10

agatctaaac cacatcctga tgagtcctg aggacgaaac agtttaaacc aagg 54

<210> 11

<211> 55

<212> DNA

<213> E. coli

<400> 11

agatctaaac gatttctga tgagtcctg aggacgaaac atcaccaaaac caagg 55

<210> 12

<211> 56

<212> DNA

<213> E. coli

<400> 12

agatctaaat gcgtctgatg agtcctgag gacgaaacag gcaggtaaaa ccaagg 56

<210> 13

<211> 53

<212> DNA

<213> Streptomyces lividans

<400> 13

agatctaaag tactcctgat gagtcctga ggacgaaacc agcgaaacca agg 53

<210> 14

<211> 55

<212> DNA

<213> Enterococcus faecalis

<400> 14

agatctaaaa cttttgctga tgagtcctg aggacgaaac gtgtataaac caagg 55

<210> 15

<211> 54

<212> DNA

<213> Psudeomonas putida

<400> 15

agatctaaat cgttttctga tgagtcctg aggacgaaac gtgataaacc aagg 54

<210> 16

<211> 54

<212> DNA

<213> Streptomyces coelicolor

<400> 16

agatctaaag tcgatgctga tgagtcctg aggacgaaac ttcgcaaacc aagg 54

<210> 17
 <211> 56
 <212> DNA
 <213> *Staphylococcus warneri*

 <400> 17
 agatctaaat gcgtctgatg agtccgtgag gacgaaacag gcaggcgaaa ccaagg 56

 <210> 18
 <211> 38
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> B2 consensus

 <400> 18
 tgctcttctg atgagtcctg gaggacgaaa ccgcctga 38

 <210> 19
 <211> 39
 <212> DNA
 <213> *Mus musculus*

 <400> 19
 ttcaaagact gatgagtcctg tgaggacgaa acgaggatc 39

 <210> 20
 <211> 34
 <212> DNA
 <213> *Mus musculus*

 <400> 20
 gtccatctga tgagtcctg aggacgaaac cggc 34

 <210> 21
 <211> 36
 <212> DNA
 <213> HBV

 <400> 21
 attagagctg atgagtcctg gaggacgaaa caaacg 36

 <210> 22
 <211> 37
 <212> DNA
 <213> HPV

 <400> 22
 gtctgactg atgagtcctg gaggacgaaa cattgca 37

 <210> 23
 <211> 44
 <212> DNA
 <213> *Homo sapiens*

 <400> 23

tccgttgtct ctgatgagtc cgtgaggacg aaacatgaca ccga 44

<210> 24

<211> 39

<212> DNA

<213> Homo sapiens

<400> 24

gcgaggagct gatgagtcg tgaggacgaa acatggtgt 39

<210> 25

<211> 37

<212> DNA

<213> Mus musculus

<400> 25

aacttttctg atgagtcggt gaggacgaaa cataatg 37

<210> 26

<211> 42

<212> DNA

<213> Rattus norvegicus

<400> 26

tcgaagctgt ctgatgagtc cgtgaggacg aaaccgcgtt ga 42

<210> 27

<211> 37

<212> DNA

<213> Mus musculus

<400> 27

atcagggtct gatgagtcg tgaggacgaa aggtgcc 37

<210> 28

<211> 37

<212> DNA

<213> Rattus norvegicus

<400> 28

tcttcgactg atgagtcggt gaggacgaaa catggt 37

<210> 29

<211> 37

<212> DNA

<213> Homo sapiens

<400> 29

tagcacactg atgagtcggt gaggacgaaa cgtttga 37

<210> 30

<211> 36

<212> DNA

<213> Homo sapiens

<400> 30

tgcaatactg atgagtcggt gaggacgaaa ctgcct 36

<210> 31
<211> 36
<212> DNA
<213> Homo sapiens

<400> 31
aagtcacatctg atgagtcctgt gaggacgaaa cctgga 36

<210> 32
<211> 36
<212> DNA
<213> Homo sapiens

<400> 32
gataaggctg atgagtcctgt gaggacgaaa ctttcc 36

<210> 33
<211> 36
<212> DNA
<213> Homo sapiens

<400> 33
catattcctg atgagtcctgt gaggacgaaa cactcg 36

<210> 34
<211> 38
<212> DNA
<213> Homo sapiens

<400> 34
tcattgtatct gatgagtcctg tgaggacgaa acaaaaagg 38

<210> 35
<211> 36
<212> DNA
<213> Homo sapiens

<400> 35
ggttaaactg atgagtcctgt gaggacgaaa cttggg 36

<210> 36
<211> 36
<212> DNA
<213> Homo sapiens

<400> 36
gtccagtctg atgagtcctgt gaggacgaaa cttaag 36

<210> 37
<211> 55
<212> DNA
<213> Artificial Sequence

<220>
<223> primer

<400> 37
 cccgggaatt cgtgatggcc acgcggcgc tcgagctctg atgagtcctg gagga 55

 <210> 38
 <211> 59
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> primer

 <400> 38
 gacgggatcc agatctgagc tcgagctgac ggtaccgggt accgtttcgt cctcacgga 59

 <210> 39
 <211> 55
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> primer

 <400> 39
 gagctcagat ctggatccgt cgacggatct agatccgtcc tgatgagtcc gtgag 55

 <210> 40
 <211> 46
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> primer

 <400> 40
 ttgcttggcc agcggcgcgt gcagatccgt ttcgtctctca cggact 46

 <210> 41
 <211> 41
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> primer

 <400> 41
 gatctgctct tctgatgagt ccgtgaggac gaaaccgctg a 41

 <210> 42
 <211> 41
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> primer

 <400> 42
 gatctcagcg gtttcgtcct caccgactca tcagaagagc a 41

<210> 43
 <211> 64
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> ribozyme construct

 <400> 43
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 tgaa 64

 <210> 44
 <211> 65
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> ribozyme construct

 <400> 44
 cttggaaccg gatgccaggc atccggttaa gaagtttcgt cctcacggac tcatcagtta 60
 cccta 65

 <210> 45
 <211> 65
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> ribozyme construct

 <400> 45
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 atctg 65

 <210> 46
 <211> 64
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> ribozyme construct

 <400> 46
 aattcaaccg gatgccaggc atccggtttg gacctttcgt cctcacggac tcatcagagc 60
 gtgg 64

 <210> 47
 <211> 63
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> ribozyme construct

```

<400> 47
aattcaaccg gatgccaggc atccgggtta ccttttcgtc ctcacggact catcagtgtg 60
ttg 63

<210> 48
<211> 64
<212> DNA
<213> Artificial Sequence

<220>
<223> ribozyme construct

<400> 48
aattcaaccg gatgccaggc atccgggttaa cctttttcgt cctcacggac tcacacagtc 60
tacg 64

<210> 49
<211> 170
<212> RNA
<213> Artificial Sequence

<220>
<223> pClip triple ribozyme

<221> modified_base
<222> (1)...(170)
<223> n=a, c, g, or u

<400> 49
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gagaucunnn nnnncugaug aguccgugag gacgaaannn nnagauccgu cgacggaucu 120
agauccgucc ugaugagucc gugaggacga aacggaucug cagcggccgc 170

<210> 50
<211> 249
<212> RNA
<213> Artificial Sequence

<220>
<223> pChop triple ribozyme

<220>
<221> modified_base
<222> (1)...(249)
<223> n=a, c, g, or u

<400> 50
aagcuuugga acccugauga guccgugagg acgaaacgau gacauucugc ugaccagauu 60
cacggucagc agaaugucau cgucgggucc aggaucnnnn nnnncugauga guccgugagg 120
acgaaannnn nnnnnggaau uccaaggguc ugcgcaacga cgacgaugag guaccacauc 180
gucgucguug cgcacugaug agggcgugag gccgaaaccc uugacgcguu ccuaugcggc 240
cgcucuaga 249

<210> 51
<211> 364
<212> DNA

```

213> Artificial Sequence

<220>

<223> pSnip ribozyme cassette

<400> 51

```
aagcttcgag ctctgatgag tccgtgagga cgaaacggta cccggtaccg tcagctcgac    60
ctcagatctc tcgagcaatt gatecgtcga cggatgtaga tccgtcctga tgagtcctg    120
aggacgaaac ggatctcgag cggatatcca gctttggaac cctgatgagt ccgtgaggac    180
gaaacgatga cattctgctg accagattca cggtcagcag aatgtcatcg tcggttccag    240
gatecttgcc tgaattccaa gggctctgcg aacgacgacg atgaggtacc acatcgtcgt    300
cgttgcgcac tgatgaggcc gtgaggccga aacccttgac gcgttcctat gcggccgctc    360
taga    364
```

<210> 52

<211> 685

<212> DNA

<213> Artificial Sequence

<220>

<223> modified pChop cassette

<400> 52

```
tcagaaaatt attttaaatt tccaattgac attgtgagcg gataacaata taatgtgtgg    60
aagcttatcg ataccgtcga cctcgaagct ttggaaccct gatgagtcgg tgaggacgaa    120
acgatgacat tctgctgacc agattcacgg tcagcagaat gtcacgtcgc gttccaggat    180
ccggctgcta acaaagcccg aaagggaagct gagttggctg ctgccaccgc tgagcaataa    240
ctagcataac cccttggggc ctctaaacgg gtcttgaggg gttttttgct gaaaggagga    300
actatatacg gatataccgc aagaggcccg gcagtaccgg cataaccaag cctatgccta    360
cagcatccag ggtgacggtg ccgaggatga cgatgagcgc attgttagat ttcatacacg    420
gtgcctgact gcgttagcaa tttaactgtg ataaactacc gcattaaagc ttatcgatga    480
taagctgtca aacatgagaa ttcggcgtat acgccgaatt tcaagggtct gcgcaacgac    540
gacgatgagg taccacatcg tcgtcgttgc gcactgatga ggccgtgagg ccgaaaccct    600
tgacgcgtaa aaaaaaccgg ccccgcgagg ttttttacct ttcctatcgc gcgcgtctag    660
tcgagggggg gcccgctaga actag    685
```

<210> 53

<211> 216

<212> DNA

<213> Artificial Sequence

<220>

<223> pChop ribozyme cassette

<400> 53

```
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cacggucage agaaugucau cgucgguucc aggauccuug ccugaaaucc aaggguucugc    120
gcaacgacga cgaugaggua ccacaucguc gucguugcgc acugaugagg ccgugaggcc    180
gaaaccuuug acgcguuccu augcggecgc ucuaga    216
```

<210> 54

<211> 54

<212> DNA

<213> E. coli

<400> 54

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<212> DNA

<213> *Pseudomonas putida*

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<210> 71

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<213> *Pseudomonas putida*

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<210> 72

<211> 54

<212> DNA

<213> *Streptomyces coelicolor*

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<213> *Streptomyces coelicolor*

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